"Finding the occasional straw of truth awash in a great ocean of confusion and bamboozle requires intelligence, vigilance, dedication, and courage. But if we don't practice these tough habits of thought, we cannot hope to solve the truly serious problems that face us—and we risk becoming a nation of suckers, up for grabs by the next charlatan [or sophist] that comes along."
—Carl Sagan, "The Fine Art of Baloney Detection"

[Is Carl Sagan himself a charlatan? If so, why? If not, why not?]

Introduction

Now we approach a study of the pathology of arguments in the study of informal fallacies. A fallacy (Latin, fallere, to deceive) is an argument that is incorrect, but may appear to some in some contexts to be a correct argument. Bad reasoning occurs when people construct arguments that are fallacious without realizing that they are doing so. Fallacies may be divided up into two categories, formal and informal.

A formal fallacy is an invalid deductive argument that so resembles a valid deductive pattern that persons can be misled into thinking it is valid (see Organizational Outline for a summary of the formal fallacies).

An informal fallacy is one in which the incorrectness is not a function of an invalid form, but is a consequence of the ambiguity of language or one that is ultimately irrelevant to the subject matter of the argument. Ever since Aristotle wrote On Sophistical Refutations (see addendum, De Sophistici Elenchi), the topic of informal fallacies has been studied. In the material which follows (following Aristotle’s lead), we shall divide informal fallacies into two groups: fallacies of ambiguity and fallacies of relevance.

Fallacies of ambiguity are generally, but not necessarily always, deductive arguments which appear to be valid but are not because of a shift in the meaning of a word, phrase, or sentence.

Fallacies of relevance are arguments whose premises are unrelated (irrelevant) to the conclusion. The premises contain information which may appear to be relevant but which in fact is not relevant in establishing the conclusion as true.

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1 NB: This material is taken from several logic texts authored by N. Geisler, H. Kahane, and others. I make no claim to originality in this material.
We might look upon fallacies of relevance as arguments for a conclusion other than the stated conclusion. Nonetheless, the content of the fallacies of relevance can in some circumstances trick some people to accept the stated conclusion as true as if it were indeed based on the (actually irrelevant) premises.

Informal fallacies are frequently engendered by some motive on the part of the arguer to deceive the reader. The arguer may not have sufficient evidence to support a certain conclusion and as a result may attempt to win its acceptance by resorting to a trick.

Informal fallacies may also be the result of rational or logical immaturity on the part of the arguer in which the arguer simply does not recognize that he or she is deploying informal fallacies which are naively presented as genuine evidence when in fact it is not.

By studying some of the ways in which arguers deceive others and even themselves, we can master that "fine art of baloney detection," protect ourselves from falsehood, and construct better arguments in our own use of reason in the quest to understand and disseminate truth.

Synonyms for informal fallacies: hogwash, foohey, malarkey, baloney, fog, hocus pocus, mumbo jumbo, humbug, legerdemain, hokey pokey, chicanery, artifice, stratagem, wiles, ruse, hoax, sham, delusion, pretense, prank, spoof, guile, obfuscation, gobbledygook, jargon, nonsense, gibberish, babble, twaddle, drivel, bunk, rubbish, chaff, tommyrot, crock, bull, balderdash, horsefeathers, bosh, fudge, foolishness, folly, rigamarole, poppycock, flapdoodle, palaver, claptrap, bombast, jabberwocky, prattle, clutter, rattle, running on at the mouth, cackle, chitterchatter.